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**Weichelt**

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(54) **AUTOMATIC PROCESS AND MACHINE  
FOR WEAVING ONE CONTINUOUS ROPE**

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87/12; 87/53

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(56) **References Cited**

#### U.S. PATENT DOCUMENTS

3,550,166 \* 12/1970 Kotler ..... 5/122  
3,592,494 \* 7/1971 Pajulaid et al. .... 289/1.5  
3,955,602 \* 5/1976 King ..... 139/13 R

4,445,417 \* 5/1984 Iijima et al. .... 87/12  
4,615,256 \* 10/1986 Fukuta et al. .... 87/33  
4,651,620 \* 3/1987 Lyons ..... 87/12  
5,273,078 \* 12/1993 Kimbara et al. .... 139/11  
5,351,722 \* 10/1994 Mamiliano ..... 139/180

\* cited by examiner

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(57) **ABSTRACT**

An automatic weaving process for the manufacture of rope hammock beds in which a bobbin of rope passes through loops of rope from the same bobbin resulting in a traditional weave (FIG. 1) from one continuous rope. The process and machine create a woven, open mesh pattern of rope or like materials for forming articles, such as hammocks. The means comprise a frame having a plural set of opposed reciprocal rods, each having a pulley-shaped or like structure mounted on their opposing ends. The frame also supports a means for attaching one end of the rope, and a set of pulleys to each side centrally, but laterally movable to the rods. The sets of rods, each set comprising rods which are situated in opposing and alternating relationship to the other set of rods, alternately move in and rotate in sequence to capture a portion of the rope strung across the center of the place of rods, and form an undulating pattern of the rope, through which the supply end of the rope is passed, or "shuttled", back and forth, also in sequence.

1 Claim, 8 Drawing Sheets

